

WHAT IS CLAIMED IS:

1. An optical device module comprising:  
an optical device with a plurality of electrodes disposed at  
predetermined positions;  
5 a substrate disposed oppositely to the optical device and with  
wiring patterns for connecting to the electrodes; and  
a wiring which connects the electrodes to the wiring patterns.
2. The optical device module according to claim 1, further  
10 comprising a pair of side wall plates that hold the substrate on the  
optical device.
3. The optical device module according to claim 2, further  
comprising:  
15 a heating/cooling unit that performs a function selected from a  
group consisting of heating the optical device using self-generated heat  
and cooling the optical device by absorbing heat; and  
a soaking unit that uniformly transmits the heat generated by the  
heating/cooling unit to an entire surface of the optical device, wherein  
20 the side wall plates are arranged on the soaking unit.
4. The optical device module according to claim 2, further  
comprising:  
a heating/cooling unit that performs a function selected from a  
25 group consisting of heating the optical device using self-generated heat

and cooling the optical device by absorbing heat; and

a soaking unit that uniformly transmits the heat generated by the heating/cooling unit to an entire surface of the optical device; and

a package that holds the heating/cooling unit, wherein

5 the side wall plates are arranged on the inner bottom surface of the package.

5. The optical device module according to claim 1, wherein at least one opening is formed on the substrate for passing the wiring so that  
10 the electrodes can be connected to the wiring patterns.

6. The optical device module according to claim 1, wherein the substrate includes a plurality of substrates.

15 7. The optical device module according to claim 3, wherein the heating/cooling unit is selected from a group consisting of a heater and a Peltier element.

8. The optical device module according to claim 4, wherein the  
20 heating/cooling unit is selected from a group consisting of a heater and a Peltier element.

9. The optical device module according to claim 1, wherein the optical device is a waveguide type optical device.

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10. The optical device module according to claim 8, wherein an acousto-optic tunable optical filter is used for waveguide type optical device.
- 5 11. The optical device module according to claim 2, wherein the substrate and the side wall plates are made of material having relatively low heat conductivity.
12. The optical device module according to claim 11, wherein the  
10 substrate and the side wall plates are made of ceramics.
13. The optical device module according to claim 1, wherein the electrodes are electrodes of an inter-digital transducer that excites surface acoustic wave.
- 15 14. The optical device module according to claim 1, further comprising:  
a lead-through block with wiring patterns provided on a side surface of the substrate for leading through the wiring patterns formed  
20 on the substrate and leads with free communication with the relevant wiring patterns; and  
a wiring that connects the wiring patterns to the wiring patterns.
15. The optical device module according to claim 1, wherein the  
25 wiring pattern includes a signal line for supplying specified signals and

a ground line in communication with the ground.

16. The optical device module according to claim 15, wherein the wiring patterns is any of a 50- $\Omega$  line selected from a group consisting of
- 5 a microstrip, a grounded coplanar, a coplanar.